

ABSTRACT

Semiconductor devices and methods for manufacturing the same in which
5 deterioration of the electrical characteristic is suppressed are described. One method for
manufacturing a semiconductor device includes the steps of: forming a first polysilicon layer
32 on a gate dielectric layer 20; forming a silicon nitride layer 92 on the first polysilicon
layer 32; forming a second polysilicon layer 94 on the silicon nitride layer 92; forming
sidewall spacers; forming an insulation layer 60 that covers the second polysilicon layer 94;
10 planarizing the insulation layer 60 until an upper surface of the second polysilicon layer 94
is exposed; removing the second polysilicon layer 94; removing the silicon nitride layer 92
to form a recessed section 80; and filling a metal layer 34 in the recessed section 80 to form
a gate electrode 30 that includes at least the first polysilicon layer 32 and the metal layer 34.

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